

Attorney Docket No. P65141US0
Application No. 09/508,095

Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claims 1-29 (cancelled)

30. (Currently amended) A peptide having bifidogenic properties and wherein the peptide is

— an amino acid sequence selected from the group consisting of:

- a) R_1 -EVAARARVW- R_2 (SEQ ID NO: 8),
- b) R_1 -ARRARVVWAAVG- R_2 (SEQ ID NO: 22),
- c) R_1 -ARRARVVWCAVG- R_2 (SEQ ID NO: 14), and
 R_3 -CIAL- R_4 (SEQ ID NO: 15)
- d) R_1 -ARRARVVWCAVGE- R_2 (SEQ ID NO: 16),
 R_3 -CIAL- R_4 (SEQ ID NO: 15)

wherein

R_1 , R_3 independently represent H or a peptide containing up to 100 amino acids; and

R_2 , R_4 independently represent OH, NH_2 , or a peptide containing up to 100 amino acids;

— ~~d) amidated, acetylated, sulfated, phosphorylated, glycosylated, and oxidized derivatives and fragments, thereof, having bifidogenic properties; and the amino acid sequence N-~~

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modified by amidation, acetylation, sulfation, phosphorylation, glycosylation, or oxidation:

or

— e) peptides obtainable by the combination of the peptides, fragments, and derivatives a
fusion protein, thereof, obtained by chemical bonding.

31. (Previously presented) A peptide according to claim 30 selected from the group consisting of
SEQ ID NO: 8 and SEQ ID NO: 22.

32. (Previously presented) A medicament containing at least one peptide according to claim 30.

33. (Previously presented) A medicament containing at least one peptide according to claim 31.

Claims 34 and 35 (cancelled).

36. (Previously presented) A peptide having bifidogenic properties and selected from the group
consisting of SEQ ID NO: 14 and SEQ ID NO: 16.

37. (Previously presented) A medicament containing at least one peptide according to claim 36.

Claims 38 and 39 (cancelled).

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40. (Currently amended) A peptide having bifidogenic properties and wherein the peptide is

a) amino acid sequence

R_1 -EVAARARVW- R_2 (SEQ ID NO: 8), R_1 -ARRARVVWCAVG- R_2 (SEQ ID NO: 14),
 R_3 -CIAL- R_4 (SEQ ID NO: 15)

R_1 -ARRARVVWCAVGE- R_2 (SEQ ID NO: 16),
 R_3 -CIAL- R_4 (SEQ ID NO: 15)

R_1 -GRRRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIOA- R_2
 (SEQ ID NO: 19),

R_1 -ARRARVVWAAVG- R_2 (SEQ ID NO: 22),

wherein

R_1 , R_3 independently represents NH_2 , an amino acid, or a peptide containing up to 100 amino acids, and

R_2 , R_4 independently represents $COOH$, $CONH_2$, an amino acid, or a peptide containing up to 100 amino acids[;] , or

~~b) amino acid sequence~~

R_1 -YQRRPAIAINNPYVPRITYANPAVVRPHAQIPQRQYLPSHPPTVVRPNLHPSF- R_2 (SEQ ID NO: 17),

wherein

R_1 , R_3 independently represents H or a peptide containing up to 100 amino acids excluding amino acid sequence 1-62 of human κ -casein, and

R_2 , R_4 independently represents OH, NH_2 , or a peptide containing up to 100 amino acids excluding amino acid sequence 1-62 of human κ -casein; or

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c b) the peptide amino acid sequence N-modified by amidation, acetylation, sulfation, phosphorylation, glycosylation, or oxidation having bifidogenic properties.

41. (Currently amended) A peptide having bifidogenic properties and wherein the peptide is

— amino acid sequence

- a) (SEQ ID NO: 8),
- b) (SEQ ID NO: 14),
- c) (SEQ ID NO: 22), or
- d) R_1 -ARRARVVWCAVG- R_2 (SEQ ID NO: 14) — and
 R_3 -CIAL- R_4 (SEQ ID NO: 15)

wherein

R_1 , R_3 independently represent H or a peptide containing up to 100 amino acids; and

R_2 , R_4 independently represent OH, NH_2 , or a peptide containing up to 100 amino acids; or

— e) or the amino acid sequence N-modified by amidation, acetylation, sulfation, phosphorylation, glycosylation, or oxidation ~~amidated, acetylated, sulfated, phosphorylated, glycosylated, oxidized derivatives or fragments, thereof, having bifidogenic properties.~~

Claims 42 and 43 (cancelled).

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44. (Previously presented) A composition for human administration comprising the peptide of claim 40 in combination with a physiologically acceptable excipient in a galenic formulation.
45. (Previously presented) A composition for human administration comprising the peptide of claim 41 in combination with a physiologically acceptable excipient in a galenic formulation.